

贵州普安矿区晚二叠世煤中贵金属元素的赋存状态和地质成因

[点此下载全文](#)

引用本文: 杨建业.2007.贵州普安矿区晚二叠世煤中贵金属元素的赋存状态和地质成因[J].地球学报,28(3):277-282.

DOI: 10.3975/cagsb.2007.03.06

摘要点击次数: 514

全文下载次数: 621

作者	单位	E-mail
杨建业	西安科技大学,陕西西安710054	yangjy@xust.edu.cn

基金项目:国家重点基础研究发展计划(编号:2006CB202201); 陕西省教育厅自然科学基金项目(编号:DK01jk145); 陕西科技厅自然科学基金项目(编号:2004D02)

中文摘要:运用电感耦合等离子体质谱(ICP-MS)和逐级化学提取技术(SCET)对贵州西部普安矿区晚二叠世煤中贵金属元素的含量、赋存状态和成因机理进行了研究.结果表明,贵州普安矿区2号主采煤层的矿物组成主要为低温热液流体成因的黄铁矿和陆源碎屑成因的粘土矿物;与中国煤相比,该煤中Rh(38 ng/g)、Pb(640 ng/g)、Ir(9 ng/g)、Pt(98 ng/g)、Au(16 ng/g)和Ag(1620 ng/g)明显富集,其中Pb、Ir、Au的含量分别是中国煤的4.3倍、9倍和5.3倍.逐级化学提取结果表

中文关键词:[煤](#) [贵金属元素](#) [赋存状态](#) [黄铁矿](#) [低温热液流体](#)

Modes of Occurrence and Geological Origins of Noble Metal Elements in Late Permian Coals from the Pu'an Coalfield, Guizhou Province

Abstract:The concentrations, modes of occurrence, and origins of noble metal elements in Late Permian coals from the Pu'an coalfield were studied by using inductively coupled plasma-mass spectrometry (ICP-MS) and sequential chemical extraction technology (SECT). The results show that the minerals in No. 2 coal seam of the Pu'an coalfield are dominated by pyrite of low-temperature hydrothermal origin and clay minerals of detrital terrigenous origin. Compared with coals of China, Rh (38 ng/g), Pd (640 ng/g), Ir (9 ng/g), Pt (98 ng/g), Au (16 ng/g), and Ag (1620 ng/g) are significantly high in No.2 coal seam. The concentrations of Pd, Ir, and Au in No.2 coal seam are 4.3, 9, and 5.3 times higher than those in coals of China, respectively. The SECT results indicate that the noble metals concentrated in No.2 coal seam mainly exist in the sulfide association state. The concentrations of Rh, Pd, Ir, Pt, Au, and Ag in the sulfide association are 720 ng/g, 15000 ng/g, 310 ng/g, 2380 ng/g, 360 ng/g, and 32300 ng/g, respectively. However, the concentrations of noble metals occurring in organic and silicate associations were lower than or close to their background values in coal. The low-temperature hydrothermal fluids must have played a dominant role in the enrichment of noble metals in the coal.


keywords:[coal](#) [noble metal elements](#) [mode of occurrence](#) [pyrite](#) [low-temperature hydrothermal fluid](#)

[查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)

版权所有 《地球学报》编辑部 Copyright©2008 All Rights Reserved

主管单位: 国土资源部 主办单位: 中国地质科学院

地址: 北京市西城区百万庄大街26号, 中国地质科学院东楼317室 邮编: 100037 电话: 010-68327396 E-mail: dqjxub@126.com

 技术支持: 东方网景